SANTA CRUZ BIOTECHNOLOGY, INC.

ACTR-IB (N-20): sc-11984

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the transforming growth factor β superfamily bind to a pair of transmembrane proteins, known as receptor types I and II, which contain serine/threonine kinases and associate to form a signaling complex. Activin has been shown to bind a heteromeric noncovalent complex, which consists of a type I receptor, ACTR-IA (also designated ACVRI and ALK-2) or ACTR-IB (also designated ALK-4 and SKR2), and a type II receptor, ACTR-IIA (also designated ACVR2A) or ACTR-IIB (also designated ACVR2B). Both receptor types are highly expressed in brain. The activin receptor family members are thought to mediate distinct effects on gene expression, cell differentiation, and morphogenesis in a dose dependent fashion.

REFERENCES

1. Attisano, L., et al. 1993. Identification of human activin and TGF β type I receptors that form heteromeric kinase complexes with type II receptors. Cell 75: 671-680.
2. Carcamo, J., et al. 1994. Type I receptors specify growth-inhibitory and transcriptional responses to transforming growth factor β and activin. Mol. Cell. Biol. 14: 3810-3821.

CHROMOSOMAL LOCATION

Genetic locus: ACVR1B (human) mapping to 12q13.13; Acvr1b (mouse) mapping to 15 F2.

SOURCE

ACTR-IB (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ACTR-IB of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11984 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACTR-IB (N-20) is recommended for detection of ACTR-IB of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACTR-IB (N-20) is also recommended for detection of ACTR-IB in additional species, including equine, bovine and porcine.

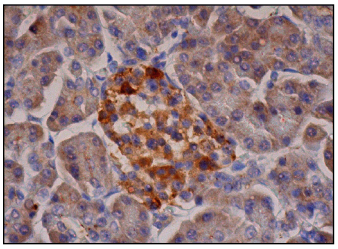
Suitable for use as control antibody for ACTR-IB siRNA (h): sc-40208, ACTR-IB siRNA (m): sc-40209, ACTR-IB shRNA Plasmid (h): sc-40208-SH, ACTR-IB shRNA Plasmid (m): sc-40209-SH, ACTR-IB shRNA (h) Lentiviral Particles: sc-40208-V and ACTR-IB shRNA (m) Lentiviral Particles: sc-40209-V.

Molecular Weight of ACTR-IB: 55 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ACTR-IB (N-20): sc-11984. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

SELECT PRODUCT CITATIONS

1. Filby, C.E., et al. 2011. Stimulation of activin A/nodal signaling is insufficient to induce definitive endoderm formation of cord blood-derived unrestricted somatic stem cells. Stem Cell Res. Ther. 2: 16.
2. Hardy, C.L., et al. 2013. The activin A antagonist follistatin inhibits asthmatic airway remodelling. Thorax 68: 9-18.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.